

Form PTO-1449
(REV. 7-80)

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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

ENZ-1 (Cont.)-Div. II 130,097

APPLICANT

David C. Ward, et al.

FILING DATE
12/7/87

GROUP 180

Information Disclosure Statement Filed By Applicant (Use several sheets if necessary)

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|----|-----------------|----------|-----------------------------|-------|----------|-------------------------------|
| <i>grc</i> | AA | 3 3 2 8 3 8 9 | 6/27/67 | Shimizu et al. | 260 | 211.5 | |
| | AB | 3 3 3 7 5 3 0 | 8/22/67 | Ranze | 260 | 211.5 | |
| | AC | 3 3 3 8 8 8 2 | 8/29/67 | Wechter | 260 | 211.5 | |
| | AD | 3 8 0 4 8 2 6 | 4/10/74 | Scheit et al. | 260 | 211.5R | |
| | AE | 3 8 9 3 9 9 8 | 7/3/75 | John A. Secrist III, et al. | 260 | 211.5R | |
| | AF | 3 9 1 5 9 5 8 | 10/28/75 | Shuman et al. | 260 | 211.5R | |
| | AG | 3 9 1 7 5 8 3 | 11/4/75 | Meyer et al. | 260 | 211.5R | |
| | AH | 3 9 6 0 8 4 0 | 6/1/76 | John A. Secrist III et al. | 260 | 211.5R | |
| | AI | 3 9 6 8 1 0 1 | 7/6/76 | Christensen et al. | 260 | 211.5R | |
| | AJ | 4 0 0 8 3 6 3 | 2/15/77 | Luciano Re et al. | 536 | 28 | |
| | AK | 4 0 3 8 4 8 0 | 7/26/77 | Robins et al. | 536 | 27 | |

FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|------------|----|-----------------|----------|----------------------------|-------|----------|-------------|----|
| | | | | | | | YES | NO |
| | AL | 2 6 1 8 4 1 9 | 11/4/76 | German Offenlegungsschrift | 2 | | | X |
| | AM | 2 6 1 8 5 1 1 | 11/4/76 | German Offenlegungsschrift | 2 | | | X |
| | AN | 3 0 4 5 3 7 5 | 7/1/82 | German Offenlegungsschrift | 3 | | | X |
| <i>grc</i> | AO | 2 0 1 9 4 0 8 | 10/31/79 | United Kingdom Pat. Appln. | 3 | | | |
| | AP | 2 0 2 6 6 9 0 | 2/6/80 | United Kingdom Pat. Appln. | 3 | | | |

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

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| AR | J. G. J. Bauman et al., "A New Method for Fluorescence Microscopical Localization of Specific DNA Sequences by In Situ Hybridization of Fluorochrome-Labelled RNA", Exp. Cell Res., 128, pp. 485-90 (1980) ["Bauman I"] |
| AS | |
| AT | J. G. J. Bauman et al., "Rapid and High Resolution Detection of in situ Hybridisation to Polytene Chromosomes Using Fluorochrome-Labeled RNA," Chromosoma (Berl.) 84, pp. 1-18 (1981) ["Bauman II"] |

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L. ERIC CRANE

DATE CONSIDERED

17 JUN 19

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|---------------------|--------------------------|---------------------|------------------------------|-------|----------|-------------------------------|
| AA | 4 0 4 8 3 0 7 | 9/13/77 | Yokota et al. | 424 | 180 | |
| <i>AR</i> | AB 4 0 8 6 4 1 7 | 4/25/78 | Ishida et al. | 536 | 29 | |
| AC | 4 0 8 8 6 3 9 | 5/9/78 | Zappelli et al. | 260 | 112.5R | |
| AD | 4 0 9 6 3 2 4 | 6/20/78 | Kelly et al. | 536 | 23 | |
| AE | 4 1 3 4 7 9 2 | 1/16/79 | Boguslaski et al. | 195 | 99 | |
| AF | 4 1 5 1 3 4 9 | 4/24/79 | Traeger et al. | 536 | 28 | |
| AG | 4 1 7 1 4 3 2 | 10/16/79 | Carrico et al. | 536 | 26 | |
| AH | 4 2 1 3 8 9 3 | 7/22/80 | Carrico et al. | 260 | 112.5 | |
| <i>AR</i> | AI 4 2 2 8 2 3 7 | 10/14/80 | Hevey et al. | 435 | 7 | |
| <i>AR</i> | AJ 4 2 3 0 6 9 8 | 10/28/80 | Bobek et al. | 424 | 180 | |
| <i>AR</i> | AK 4 2 3 0 7 9 7 | 10/28/80 | Boguslaski, et al. | 435 | 7 | |

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| | | | | | | YES | NO |
| AL | 2 0 3 4 3 2 3 | 6/4/80 | United Kingdom Pat. Appln. | 3 | | | |
| AM | 2 0 4 1 9 2 2 | 9/17/80 | United Kingdom Pat. Appln. | 3 | | | |
| AN | 2 0 4 5 2 3 9 | 10/29/80 | United Kingdom Pat. Appln. | 3 | | | |
| AO | 2 1 2 5 9 6 4 | 3/14/84 | United Kingdom Pat. Appln. | 3 | | | |
| AP | 0 7 0 6 8 5 | 1/26/83 | EPO Patent Application | 3 | | | |

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

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| <i>AR</i> | AR | E. A. Bayer and M. Wilchek, "The Use of the Avidin-Biotin Complex as a Tool in Molecular Biology," in <u>Methods of Biochemical Analysis</u> , 26, pp. 1-45 (1980) |
| <i>AR</i> | AS | D. Bergstrom and M. Ogawa, "C-5 Substituted Pyrimidine Nucleosides. 2. Synthesis Via Olefin Coupling To Organopalladium Intermediates Derived From Uridine and 2'-Deoxyuridine, <u>J. Am. Chem. Soc.</u> , 100, pp. 8106-8112 (1978) ["Bergstrom I"] |
| | AT | |

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| AA | 4-2-4-7-5-4-4 | 1/27/81 | Bergstrom et al. | 424 | 180 | |
| AB | | | | | | |
| AC | 4-2-6-4-8-9-3 | 4/14/81 | Boguslaski et al. | 260 | 326N | |
| AD | 4-2-6-7-1-7-1 | 5/12/81 | Bergstrom et al. | 424 | 180 | |
| AE | 4-3-0-2-2-0-4 | 11/24/81 | Wahl et al. | 23 | 230.3 | |
| AF | 4-3-1-8-9-8-0 | 3/9/82 | Boguslaski et al. | 435 | 7 | |
| AG | 4-3-1-8-9-8-1 | 3/9/82 | Burd et al. | 435 | 7 | |
| AH | 4-3-1-8-9-8-2 | 3/9/82 | Hornby et al. | 435 | 7 | |
| AI | 4-3-5-5-1-6-5 | 10/19/82 | Boguslaski et al. | 544 | 237 | |
| AJ | 4-3-5-8-5-3-5 | 11/9/82 | Falkow et al. | 435 | 5 | |
| AK | 4-3-6-3-7-5-9 | 12/14/82 | Boguslaski et al. | 260 | 112.7 | |

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| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|----|-----------------|----------|-----------------------------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| AL | 7-0-6-8-7 | 1/26/83 | EPO Patent Application | 3 | | | |
| AM | 1-5-4-8-7-4-1 | 7/18/79 | Great Britain Patent | 2 | 33/16 | | |
| AN | 1-5-5-2-6-0-7 | 9/19/79 | Great Britain Patent | 2 | 33/16 | | |
| AO | 4-3-2-4-1-9-1 | 10/18/43 | Japanese Patent Application | 16E | 611.2 | | X |
| AP | 5-8-6-2-1-9-4 | 4/13/83 | Japanese Patent Application | 3C07H | 19/06 | | X |

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| AS | C. F. Bigge et al., "Palladium-Catalyzed Coupling Reactions of Uracil Nucleosides and Nucleotides," <u>J. Am. Chem. Soc.</u> , 102, pp. 2033-2038 (1980) |
| AT | C. Brandon et al., "Structure of a New Pyrimidine from <u>Bacillus Subtilis</u> Phage SP-15 Nucleic Acid", <u>Nature New Biology</u> , 239, pp. 70-71 (1972) |

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| AA | 4 3 7 4 9 2 5 | 2/22/83 | Litman et al. | 435 | 7 | |
| AB | 4 3 8 0 5 8 0 | 4/19/83 | Boguslaski et al. | 435 | 7 | |
| AC | 4 3 8 3 0 3 1 | 5/10/83 | Boguslaski et al. | 435 | 7 | |
| AD | 4 4 4 6 2 3 1 | 5/1/84 | Self | 435 | 7 | |
| AE | 4 4 6 9 8 6 3 | 9/4/84 | Ts'o et al. | 536 | 27 | |
| AF | 5 7 2 0 0 8 | 4/28/75 | Boguslaski et al. * | | | |
| AG | | | | | | |
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| AL | 8 3 0 2 2 7 6 | 7/7/83 | PCT Patent Application | 3C07H | 19/20 |
| AM | 8 3 0 2 2 7 7 | 7/7/83 | PCT Patent Application | 3C07H | 21/00 |
| AN | 8 3 0 2 2 8 6 | 7/7/83 | PCT Patent Application | 3C12Q | 1/68 |
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* United States patent application
** Abstract only.

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Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

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17 JUN 1970

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| AL | | | | | |
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Sheet 7 of 19

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| | AS | H. G. Gratzner, "Monoclonal Antibody to 5-Bromo- and 5-Iododeoxyuridine: A New Reagent for Detection of DNA Replication," <u>Science</u> , 218, pp. 474-475 (1982) |
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| ARC | AS | H. Hayashi and K. Nakanishi, "Synthesis and Absolute Configuration of (+)-5-(4',5'-Dihydroxypentyl)uracil from <u>Bacillus Subtilis</u> Phage SP-15 Deoxyribonucleic Acid," <u>J. Am. Chem. Soc.</u> , 95, pp. 4081-4083 (1973) [Hayashi I] |
| ARC | AT | H. Hayashi et al. "Structure and Synthesis of Dihydroxypentyl-uracil from Bacteriophage SP-15 Deoxyribonucleic Acid," <u>J. Am. Chem. Soc.</u> , 95, pp. 8749-8757 (1973) [Hayashi II] |

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| AS | E. S. Huang and J. S. Pagano , "Nucleic Acid Hybridization Technology and Detection of Proviral Genomes," <u>Methods Virol.</u> 6, pp. 457-497 (1977) |
| AT | A. M. Jeffrey et al. , "Benzo[a] pyrene-Nucleic Acid Derivative Found In Vivo: Structure of a Benzo[a] pyrenetetrahydrodiol Epoxide-Guanosine Adduct," <u>J. Am. Chem. Soc.</u> , 98, pp. 5714-5715 (1976) |

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